

7 adding a chaotropic agent to ^{the} an aqueous solution containing the released nucleic acid;

contacting and mixing the solution containing the released nucleic acids and the chaotropic agent with a substance containing silicon oxide thereby to bind the nucleic acids to the substance;

E1
cont. isolating the substance to which the nucleic acid is contacted from the solution;

washing the isolated substance with an aqueous washing solution containing alcohol;

eluting the nucleic acid bound to the substance from (the adsorbing solid phase) and

removing alcohol contained in (the) eluted nucleic acid,

wherein the releasing step through the eluting step are conducted separately and in turn.

E2 25. (Amended) A method for recovering a nucleic acid from a nucleic acid-bearing material, which comprises the steps of:

releasing a nucleic acid from a nucleic acid-bearing material and forming an aqueous solution containing the released nucleic acid;

The
adding a chaotropic agent to ~~an~~ aqueous solution
containing the released nucleic acid;

contacting and mixing the solution containing the
released nucleic acid and the chaotropic agent with a
substance containing silicon oxide thereby to *adsorb* ~~bind~~ the nucleic
acids to the substance;

E2 cont.
isolating the substance to which the nucleic acid is
adsorbed from the solution;

washing the isolated substance with an aqueous washing
solution containing alcohol and acetate;

eluting the nucleic acid bound to the substance, thereby
to obtain a purified nucleic acid, and

removing alcohol contained in the eluted nucleic acid,

wherein the releasing step through the eluting step are
conducted separately and in turn.

E3
29. (Amended) The method according to claim 28, which
further comprises:

the step of providing an aqueous fourth solution
containing a salt and an alcohol for washing the separated
substance, conducted separately after the separating step;

E3
cont. the step of providing an aqueous fifth solution
containing a buffer for eluting the nucleic acid from the
substance; and

the step of removing alcohol and salt remaining in the
eluted nucleic acid.

E4
33. (New) The method according to claim 20, wherein
said contacting and mixing step includes stirring the mixture
containing the released nucleic acid, chaotropic agent, and
substance at room temperature to form a nucleic acid-binding
solid phase.

34. (New) The method according to claim 20, wherein the
substance includes a solid phase selected from the group
consisting of glass beads, silica powder, quartz filter paper,
quartz wool, diatomaceous earth, and crushed products of said
glass beads, silica powder, quartz filter paper, or quartz
wool.

35. (New) The method according to claim 20, wherein the
washing step is performed with an aqueous washing solution
that does not elute the binding nucleic acid from the
substance.

36. (New) The method according to claim 20, wherein the substance is a solid phase having a particle size of about 1 to about 100 μm .

E4
Cont

37. (New) The method according to claim 25, wherein said contacting and mixing step includes stirring the mixture containing the released nucleic acid, chaotropic agent, and substance at room temperature to form a nucleic acid-binding solid phase.

38. (New) The method according to claim 25, wherein the substance includes a solid phase selected from the group consisting of glass beads, silica powder, quartz filter paper, quartz wool, diatomaceous earth, and crushed products of said glass beads, silica powder, quartz filter paper, or quartz wool.

39. (New) The method according to claim 25, wherein the washing step is performed with an aqueous washing solution that does not elute the binding nucleic acid from the substance.

40. (New) The method according to claim 25, wherein the substance is a solid phase having a particle size of about 1 to about 100 μm .

E4
cont.
41. (New) The method according to claim 26, wherein said step of providing a third solution includes stirring the mixture containing the released nucleic acid, chaotropic agent, and substance at room temperature to form a nucleic acid-binding solid phase.

42. (New) The method according to claim 26, wherein the substance includes a solid phase selected from the group consisting of glass beads, silica powder, quartz filter paper, quartz wool, diatomaceous earth, and crushed products of said glass beads, silica powder, quartz filter paper, or quartz wool.

43. (New) The method according to claim 26, wherein the step of providing an aqueous solution is performed with an aqueous washing solution that does not elute the binding nucleic acid from the substance.

44. (New) The method according to claim 26, wherein the substance is a solid phase having a particle size of about 1 to about 100 μm .

45. (New) The method according to claim 27, wherein the step of providing a third solution includes stirring the mixture containing the released nucleic acid, chaotropic agent, and substance at room temperature to form a nucleic acid-binding solid phase.

46. (New) The method according to claim 27, wherein the substance includes a solid phase selected from the group consisting of glass beads, silica powder, quartz filter paper, quartz wool, diatomaceous earth, and crushed products of said glass beads, silica powder, quartz filter paper, or quartz wool.

47. (New) The method according to claim 29, wherein the step of providing an aqueous fourth solution is performed with an aqueous washing solution that does not elute the binding nucleic acid from the substance.

48. (New) The method according to claim 27, wherein the substance is a solid phase having a particle size of about 1 to about 100 μm .

49. (New) The method according to claim 32, wherein the step of transferring the aqueous solution to a third solution includes stirring the mixture containing the released nucleic acid, chaotropic agent, and substance at room temperature to form a nucleic acid-binding solid phase.

50. (New) The method according to claim 32, wherein the substance includes a solid phase selected from the group consisting of glass beads, silica powder, quartz filter paper, quartz wool, diatomaceous earth, and crushed products of said glass beads, silica powder, quartz filter paper, or quartz wool.

51. (New) The method according to claim 32, further comprising the step of washing the substance-bound nucleic acid with an aqueous washing solution that does not elute the binding nucleic acid from the substance.

E4
cont

52. (New) The method according to claim 32, wherein the substance is a solid phase having a particle size of about 1 to about 100 μm .

REMARKS

Claims 20-29 and 32-52 are now pending.

Respectfully submitted,



Daniel J. Stanger
Registration No. 32,846
Attorney for Applicant(s)

MATTINGLY, STANGER & MALUR, P.C.
1800 Diagonal Road, Suite 370
Alexandria, Virginia 22314
Telephone: (703) 684-1120
Facsimile: (703) 684-1157
Date: March 10, 2003